AUTHOR INDEX

Badger, J. 289
Bailey, C. J. 361
Barcellos-Hoff, M. H. 349
Bhuyan, B. K. 307
Boothman, D. A. 65
Briggle, T. V. 65

Coleridge, H. M. 1
Coleridge, J. C. G. 1
Cruickshank, J. M. 385

Deen, D. F. 349
Diana, G. D. 289

Fessenden, P. 251
Flatt, P. R. 361

Grantham, C. J. 235
Greer, S. 65
Groppi, V. E. 307

Hahn, G. H. 251

Joyce, D. A. 405

Kapp, D. S. 251

Malkinson, A. M. 89
Marks, V. 361
McKinlay, M. A. 289
McMillan, M. A. 135
Meldolesi, J. 115
Meyer, J. L. 251
Morgan, W. F. 349

Otto, M. J. 289

Pevear, D. C. 289
Price Evans, D. A. 157
Pullar, T. 459

Rosenthal, L. 115
Rossmann, M. G. 289
Ryan, U. S. 235

Schultz, H. D. 1
Scott, A. K. 429
Smith, J. C. 385
Smith, T. 289

Thompson, J. A. 89
Tofilon, P. J. 349

Witschi, H. 89

AUTHOR INDEX

Badger, J. 289
Bailey, C. J. 361
Barcellos-Hoff, M. H. 349
Bhuyan, B. K. 307
Boothman, D. A. 65
Briggle, T. V. 65

Coleridge, H. M. 1
Coleridge, J. C. G. 1
Cruickshank, J. M. 385

Deen, D. F. 349
Diana, G. D. 289

Fessenden, P. 251
Flatt, P. R. 361

Grantham, C. J. 235
Greer, S. 65
Groppi, V. E. 307

Hahn, G. H. 251

Joyce, D. A. 405

Kapp, D. S. 251

Malkinson, A. M. 89
Marks, V. 361
McKinlay, M. A. 289
McMillan, M. A. 135
Meldolesi, J. 115
Meyer, J. L. 251
Morgan, W. F. 349

Otto, M. J. 289

Pevear, D. C. 289
Price Evans, D. A. 157
Pullar, T. 459

Rosenthal, L. 115
Rossmann, M. G. 289
Ryan, U. S. 235

Schultz, H. D. 1
Scott, A. K. 429
Smith, J. C. 385
Smith, T. 289

Thompson, J. A. 89
Tofilon, P. J. 349

Witschi, H. 89

SUBJECT INDEX

Acetylation polymorphism
  allele distribution 194–199
    Africa 197
    America 198
    Asia 197
    Europe 198
    Pacific 195, 196
  drugs 160, 161
  spontaneous disorders 218–220
Acetylator genotyping test 165, 166
Acetylator phenotypes, spontaneous disorders 199–217
Acetylator phenotyping test
  and age 166–170
  drug responses 172–193
  factors affecting 168, 169
  isoniazid 159, 162, 163
  sulfamethazine 162
  timing 193, 194
N-Acetyltransferase 157–223
  drugs acetylated 159
  polymorphism 170–172
Adult respiratory distress syndrome, BHT use 103, 104
Adverse reactions (side-effects)
  hydrallazine 173, 181
  hyperthermic oncology 260, 261
  isoniazid 173
  sulfasalazine 173
  warfarin 429–431
Afferent pathways, airways regulation
  alimentary tract afferents 53, 54
  arterial baroreceptors 46–49
  arterial chemoreceptors 44–46
  bronchomotor influence 43–54
  bronchomotor reflexes 1–54
  cardiac afferents 49, 50
  cardiac mechanoreceptors 50
  cold block 18–21
  cold receptors 9, 10
  epipharyngeal 6
  laryngeal 7–9
  lower airways 11–43
  skeletal muscle afferents 51–53
  stimulation 8
Amantadine, viral uncoating 291, 292
Aminoglutethimide, acetylator phenotype 187, 188
Angiotensin converting enzyme (ACE) localization 236, 237
Annular phased array 273
Antidiabetic plants 378
Antitumor drugs, cytokinetic effects 336
Arteriosclerosis, beta-blockers 387–389
Asthma, bronchial hyperreactivity 35–37
Atheroma
  and hypertension 385–387
  and thrombus 392

Beta-blockers
  arteriosclerosis development 387–389
  atheroma modification 389–395
  cardiac damage 394
  hemodynamics 390, 391
Black widow spider venom *see also* latrotoxin
  fractionation 116
Bladder cancer
  acetylator phenotypes 200–205
  categories 204
  occupational 205
Bradykinin, bronchomotor reflex 30–32
Breast carcinoma, acetylator phenotype 208, 209
Bronchial carcinoma, acetylator phenotype 207, 208
Bronchial chemoreflexes 25, 26
Bronchial hyperreactivity, asthma 34–37
Bronchoconstriction
  axon reflex 33, 34
  cigarette smoke 29, 30
  defense reflex 26, 27
  in disease and vagal effects 34
  dusts 27
  irritants 26–30
  laryngectomy 6
  ozone 28
  sulfur dioxide 27, 28
Bronchomotor reflexes 1–54
  autocoid stimulation 30–32
  investigation methods 17–21
  sensory receptors 3
Bronchomotor responses 17, 18
  chemoreflexes 25
Butylated hydroxytoluene (BHT)
  experimental uses 103–106
  history and uses 89
  lung damage 95–99
    mechanisms 98, 99
    morphology 96–98
    toxicology 96, 98
  metabolism 90, 91
  metabolites 93
  pharmacokinetics 90–93
  phenoxy-, metabolism 93–95
  quinone methide 94, 95
  second messenger effects 100–103
  toxicity 106–108

Caffeine
  acetylator phenotype 190–192
  metabolic pathways 191
Calcium and cell necrosis 393
Calcium messenger, BHT effects 100–102
Cardiac death, sudden 398, 399
Cell cycle
  compartments 311
  drug resistance development 338, 339
  genes 338–342
  mammalian cells 308
  parameters 309–311
  regulation 340–342
Cell cycle inhibitors 307–343

drug combinations 337, 338
in vitro responses 327, 328
non cycling cell sensitivity 331–334
phase-related lethality 325–331
types 328–331
Cell cycle progression inhibition 334–336
menogaril 335
Cell growth
dominant-negative mutations 342
protein kinase regulation 339, 340
Cell synchronization methods 311–325
chemical 313–317
choice 324, 325
double thymidine 315
electronic 319
hydroxyurea 316
isoleucine deprivation 316, 317
mitotic detachment 312, 313
physical 317–320
Cell synchrony
index 322
quality 320–322
Chinese
acetylation phenotypes 221
leprosy, acetylation phenotype 222
Chlorphentermine, pulmonary endothelium metabolism 243, 244
Colorectal carcinoma, acetylator phenotype 205–207
Compound 2, stereoscopy 298–302
Congestion, bronchomotor reflex 40–43
Cyclic nucleotides, BHT effects 102, 103
Cyclosporin
administration, routes 140–142
factors affecting 141
analytical methods 135–140
blood distribution 142, 143
drugs affecting 147, 148
drugs interacting 146, 147
elimination 143, 144
excretion 145, 146
metabolism 144, 145
drugs affecting 148, 149
nephrotoxicity and drugs affecting 147
oral and intravenous analysis 137, 138
pharmacokinetics 135–151
prednisolone interaction 150, 151
sampling 139
structure 136
therapeutic concentrations 140
trimethoprim interaction 150, 151
volume of distribution 143
Cytotoxic agents, phase-related lethality 325–331

Dapsone, acetylator phenotype 189, 190
DDS
acetylator phenotype 189, 190
adverse reactions 173
clinical responses 173
Deep vein thrombosis, warfarin 432–434
Deoxycytidine metabolism, manipulation 65
Dermatitis herpetiformis, acetylator phenotype 219
Diabetes, acetylator phenotype 212, 214–217
adult onset 216
juvenile 215
Diffuse interstitial pulmonary fibrosis, BHT effect 104, 105
DNA damage, sister chromatid exchange 351–353
DNA repair, defective and sister chromatid exchange 353, 354
Drug interactions, warfarin 437–441
Drugs damaging pulmonary endothelium 244, 245

Embolism, bronchomotor reflexes 39, 40
Enzyme exploitation 65–85
Ethanol hypoglycemia 366, 367

5-Fluoro-2′-deoxycytidine
antimetabolite pool 72–78
incorporation 75
Lewis lung carcinoma 76
antitumor activity 70–72
hypomethylation 78, 79
mammary adenocarcinoma 72
metabolism channeling 68–70
research 67, 68
tumor selective metabolism 67–79
uridine phosphorylase inhibition 79
Fluropyrimidine, Lewis lung carcinoma 73
Free radical cycle 90

Gastrointestinal disorder, acetylator phenotype 218
Genes, cell cycle 338–342
Gilbert's syndrome, acetylator phenotypes 217
Glycerotoxin 129

High performance liquid chromatography, cyclosporin 136–139
Humidity, laryngeal flow 10
Hydrallazine
acetylator phenotype 181–183
adverse reactions 173, 181
clinical responses 173
metabolism 183
systemic lupus erythematosus 182
Hypertension
acetylator polymorphism 219
blood pressure control and death 399
cardiovascular morbidity 385
essential 399
Hyperthermic oncology 251–282
adjuvant and radiation therapy 267, 268
deep tumor volumes 270–281
deep ultrasound heating 275
electromagnetic 253–256
external radiating electromagnetic 273, 274
history 251
interstitial 276, 277
and radiation 277
and irradiation sequencing 268, 269
methods 253–256
perfusion 278, 279
pH 252
radiofrequency inductive methods 271, 272
response criteria 265, 266
thermosensor monitoring 255
toxicity 260, 261
tumor responses 257–260
and irradiation 258–260, 263, 264
predictors 261–264
tumors treated 257
ultrasonic 253–256
whole body 279–281
X-irradiation interaction 252

Hypoglycemia
diagnosis 361, 362
drugs inducing 361–379
treatment 362
Hypoglycemic drugs
mechanisms of action 369–378
new 375–378
oral 365–379

Inflammation, bronchomotor reflexes 38
Inhibitors
cell cycle specific 307–343
DNA synthesis 329
RNA synthesis 329
viral uncoating 289–303
enveloped 291, 292
in vitro 294–297
nonenveloped 292–294
Insulin
categorization 363
hypoglycemia 362–364
mechanism of action 369–371
cellular 370
sulfonylurea interaction 371
secretion 372–374
control 373
Isoniazid
acetylator phenotype response 172–181
adverse reaction 173
hepatotoxicity 175–177
metabolism 157
rates 157, 158
scheme 179
phenotyping 163
rifampicin interactions 177–180
Isospherical Ultrasound Device
scheme 275
temperature profile 256

Laryngeal carcinoma, acetylator phenotype 207
α-Latrotoxin
biochemistry 119–121
black widow spider 115
electrophysiology 119
ion fluxes 125
mode of action 123–129
PC12 cell interaction 126, 127
pharmacological effects 117, 118
phosphoinositide hydrolysis 128, 129
purification 115–117
receptor binding 123, 124
related toxins
synaptic electron microscopy 121–123
vesicle fusion in synapse 122
Leprosy, acetylator phenotype 219
Leptinotoxin 129, 130
Lower airways
bronchomotor afferents 11–43
C-fibers 15–17
pulmonary stretch receptors 11–15
Lung resistance, larynx stimulation 9
Lung tumor
BHT enhancement 105, 106
modulation by BHT 107
Lung volume
airways influence 21–25
bronchodilatation 22, 23
lung afferents 21, 22
paradoxical bronchoconstriction 23–25
Lymphoma, acetylator phenotype 208, 210

Mental disorders, acetylator phenotype 218
S-Methyl-D-penicillamine 409, 410
Myocardial infarction
beta-blockers 397, 398
warfarin 436

Nerve cooling 18–21
C fibre conduction 20
lung hyperinflation 24
Nitrazepam, acetylator phenotype 186, 187

Oedema, bronchomotor reflexes 40–45

D-Penicillamine 405–419
absorption 405–407
biochemical mechanisms 411
clinical action 410
cystinuria 417
elimination 407
hepatolenticular degeneration 416, 417
immunological effects 413–415
metal poisoning 417
pharmacodynamics 410–419
pharmacokinetics 405–410
progressive systemic sclerosis 418, 419
rheumatoid arthritis 410–416
structure 406
tissue protection 415
D-Penicillamine-containing disulfides
biochemistry 407, 408
metal chelate 409
pharmacokinetics 408, 409
Phenelzine, acetylator phenotype 192, 193
Pregnancy and warfarin 436, 437
Procainamide
acetylator phenotype 188, 189
adverse reactions 173
clinical responses 173
Prostaglandins, bronchomotor reflex 32
Pulmonary chemoreflexes 25, 26
Pulmonary cyclooxygenase 246, 247
Pulmonary embolism, warfarin 434, 435
Pulmonary endothelium
cell injury 244–246
endogenous substrate metabolism 235
adenine nucleotides 238, 239
arachidonic acid metabolites 239
polypeptides 236–238
transport 241
xenobiotic metabolism 239
chemistry 240
drugs 241–244
Pyrimidine deamination
enzymes in chemotherapy 65–85
tumors 66, 67

Radiation therapy and adjuvant hyperthermia 267, 268
Radioimmunoassay, cyclosporin 135, 136
Receptor, HRV-14 drug, compound orientation 302
Rheumatoid arthritis
acetylator phenotype 210, 211
D-penicillamine 410–416
sulfasalazine 459–465
sulfonamides 465

Sister chromatid exchanges
cell cycle kinetics 355, 356
cell killing 354, 355
defective DNA repair 353, 354
DNA damage 351–353
induced CHO cells 350
measurement 349–356
mechanism 356
Sodium chromoglycate, action in asthma 37, 38
Stress and beta-blockers 395–399
Subarachnoid haemorrhage and beta-blockers 395, 396
Sulfamethazine phenotyping 164
Sulfasalazine (SASP)
acetylator phenotype 184–186
adverse reactions 173
clinical responses 173
pharmacokinetics 184–186
rheumatoid arthritis 459–464
clinical studies 462–465
life-table analysis 463
pharmacology 460–462
structure 460
uses 184
Sulfonylureas
hypoglycemia 364, 365
insulinotropic 374
structures 365
Systemic lupus erythematosus, acetylator phenotype 210, 212, 213

Temperature and laryngeal flow 10
5-Trifluoromethyl-2′-deoxycytidine
antitumor 85
fluoropyrimidine comparison 81, 82
mechanism of action 81, 82
metabolic activation route 83, 84
tumor cytidine deaminase 79–85
Tumor promoters 107
Tumor volume, prognostic value 262

Viral uncoating
drug binding pocket 302, 303
inhibitors 289–303
features 291–297
mechanisms 289–291
molecular graphics 297–303

Warfarin
absorption variation 441
adverse effects 429–431
clinical management 448, 449
distribution 441, 442
doctor education 447, 448
dose prediction 450–452
drug interactions 437–441
elimination 442, 443
indications 432–437
monitoring of therapy 444–446
overdosage treatment 431, 432
patient education 447
pharmacodynamics 443, 444
risk assessment 449, 450
safety improvement 429–453
single enantiomer 452

Xenobiotic metabolism by pulmonary endothelium 239–247